High Antimony Recoveries in Metallurgy from Antimony Ridge

written by Raj Shah | May 6, 2026

Successful Initial Test Work Shows Nearly Complete Recovery of Stibnite (Antimony Sulphides) From Lower Grade Samples

May 6, 2026 (Source) – **Highlights**

- High Antimony Recovery: High rates of antimony recoveries in sulphides have been reported from concentrate test work on Antimony Ridge samples. Rougher flotation tests for stibnite were performed at IMO labs in Perth, Australia. High sulphur recovery of 99.5% (Table 3) indicates nearly complete recovery of the stibnite from the sample in this rougher concentration stage.
- Solid Results from Lower Grade Samples: The high sulphide recoveries were achieved from lower grade samples containing ~10% Antimony (Table 1). This is an encouraging indication for potential future operations because potentially all stibnite may be recovered, even if high grade antimony were to be diluted by surrounding waste or gangue material during extraction.
- Further Antimony Concentration Test Work Underway: Further concentration stages are underway in test work on Antimony Ridge samples. The “rougher” flotation work is aimed at high recovery of antimony. The following “cleaner” stages are designed to take the “rougher” sulphide concentrate and focus on achieving high grades, targeting an increase in grade from ~30% to >50% Antimony.
- Excellent Support for Prior Antimony Trioxide Results: The high rates of antimony recovery in concentrates are excellent support for the previously reported 99.38 wt.%

Antimony Trioxide product produced from large samples of stibnite from the Antimony Ridge historical open pits, using the conventional pyrometallurgical process of volatilisation (ASX announcement 14 April 2026).

- Numerous Vein Swarms: 3D modelling of numerous known antimony and silver bearing veins, veins swarms and stockworks, over a large area (1,000m x 700m) (170 acres), has revealed significant size and expanding scale potential at Antimony Ridge (ASX announcement 10 April 2026).
- FAST-41: Horse Heaven wasselected for the U.S. FAST-41 Transparency Coverage by the US-based Permitting Council, expected to accelerate permitting timelines with an application for 250 drill holes and large-scale bulk sampling (ASX announcement: 8 April 2026).
- Antimony Ridge forms part of Resolution's broader Horse Heaven strategy, which includes recently acquired processing infrastructure, tungsten stockpiles and a major 2026 drilling program at Golden Gate starting on 7 May of up to 13,700m of diamond core drilling planned.

Resolution Minerals Ltd (ASX: RML; OTCQB: RLMLF) ("Resolution" or the "Company") is pleased to report metallurgy test work is continuing, with high rates of antimony recoveries in sulphides in concentrate test work from rougher flotation tests for stibnite. Concentrate test work was conducted by IMO labs in Perth, Australia, on lower grade samplesfrom Antimony Ridge, presented in Table 1. The high sulphur recovery of 99.5% indicates nearly complete recovery of the stibnite in this rougher concentration stage.

These are encouraging results as the high sulphide recoveries were achieved from lower grade samples (10.5% antimony – Table 1). Any potential future operations extracting high grade

stibnite from vein swarms may be affected by dilution from surrounding waste or gangue material. These initial results suggest that virtually all of the stibnite would be captured in the rougher flotation concentration stage.

Support for Other Metallurgy Test Work

The high rates of antimony recovery in concentrates are excellent support for the previously reported 99.38 wt.% Antimony Trioxide product, with few impurities, produced from large samples of stibnite from the Antimony Ridge historical open pits, using the conventional pyrometallurgical process of volatilisation (ASX announcement 14 April 2026).

Previously announced 3D modelling of Antimony Ridge has revealed significant size and expanding scale potential by showing a large area (1,000m x 700m) (170 acres) with numerous known antimony and silver bearing veins, veins swarms and stockworks at Antimony Ridge (ASX announcement 10 April 2026).

The size of the project, positive preliminary concentration results for stibnite recovery and amenability of the previous high-grade samples to conventional pyrometallurgical process of volatilisation is very encouraging for the future potential development of the Antimony Ridge project.

This result follows the selection of Antimony Ridge for FAST-41 Transparency Coverage from the US Permitting Council, announced on 8 April 2026. Selection reflects the strategic importance of Antimony Ridge as a potential source of U.S. domestic antimony supply, a critical metal essential for defence, energy, and industrial applications.

Historical mining occurred at Antimony Ridge during World War I, WWII and the Korean War to support the US war effort. During World War II, the local District, including the adjoining

Stibnite Mine (Perpetua Resources NAS.PPTA), is estimated to have produced more than 90% of the US antimony (Source: Perpetua Resources Stibnite Feasibility Study, Jan 2021). Antimony Ridge was a key source of antimony for the US military. Antimony Ridge is located within Resolution's Horse Heaven Antimony-Tungsten-Gold-Silver Project in Idaho, USA, and immediately adjacent to Perpetua Resources' Stibnite Gold Project (NAS.PPTA), a large, recently permitted Antimony-Gold project that is in the construction phase.

Next Steps

Further flotation stages are now underway in concentrate test work on Antimony Ridge samples. The "rougher" flotation work reported here is aimed at high recovery of antimony. This stage provides a bulk rejection of gangue minerals with minimal loss of antimony. Subsequent "cleaner" stages are designed to take this "rougher" sulphide concentrate and then focus on achieving high grades, increasing the grade from ~30% in the rougher concentrate to >50% Sb in the cleaner concentrate.

Test work on Antimony Ridge samples using hydrometallurgical processing is underway at ANSTO in Australia and results will be released once available. Resolution's plan is to develop a hydrometallurgy processing hub for antimony, as stibnite, in Idaho, USA, due to the lack of modern processing options in the USA for antimony.

Test work is advancing on options to concentrate the antimony ore, tungsten ore and gold-bearing samples at IMO labs in Perth, Australia. Antimony Ridge is expected to be a cornerstone of Resolution's strategy to supply critical metals, including Antimony, Tungsten and Gold, from central Idaho in the USA.

On 7 May 2026 Resolution is initiating a 13,700 metre (45,000 ft) Phase 2 drilling program at the Golden Gate Target, located

within the Company’s larger Horse Heaven Antimony-Tungsten-Gold-Silver Project. The program is designed to define the scale of gold and tungsten mineralisation at Golden Gate and Golden Gate South and support progression toward a maiden Mineral Resource Estimate.

Dr. Adam Roper, Resolution’s In-house Senior Metallurgist, stated: “The initial concentration results in rougher flotation test work are very encouraging from Antimony Ridge samples. Capturing virtually all the antimony sulphides is an excellent sign of a simple and robust processing flowsheet for antimony. I’m looking forward to discussing further results in the coming weeks.”

Detailed Analysis of Concentrate Test Work

An Antimony Ridge composite was prepared using 15kg samples from Antimony Ridge from the area of past workings. The sample assay contained 10.50% Sb, with other major elements being silicon (34.4%), sulphur (3.2%), aluminium (2.71%), potassium (1.5%), iron (0.46%), calcium (0.40%) and magnesium (0.08%). The sample also contained 2.41 g/t of gold (Au). This sample was sent as an indicator of mixed material whereby potential future extraction operations may dilute the high-grade material with gangue or waste. Testing this material provides RML confidence that the stibnite can be effectively and simply separated from the gangue material.

Because the sample was collected from surface, some antimony was present as an oxide (cervantite), not just as sulphide (stibnite). The historical exposure of the stibnite to air over the last few decades would have created a setting suitable to oxidise primary sulphides to a significant extent, but this is not expected to be repeated in larger bulk samples. The composite sample was milled to a P80 75 µm – whereby 80% of the

milled sample is fine enough to pass through a 75µm screen.

Using standard flotation reagents, two five-stage rougher flotation tests were conducted at the slurry's natural pH (3.8) and at pH 7. Rougher flotation test results, presented in Table 2 and Table 3, show that increasing the pH from the natural pH (3.8) to pH 7:

- Increased the combined rougher antimony grade and recovery from 23.6% Sb at 72.2% recovery to 27.3% Sb at 76.0% recovery;
- Achieved similar gold grade and recovery, FT01 and FT02 has respective grades and recoveries of 4.3 g/t Au at 49.3% and 4.4 g/t Au at 52.0%; and
- Reduced the combined rougher sulphur grade from 16.5% S to 15.9% S with no change in recovery, which remained constant at 99.5%.

IMO has noted that the high sulphide recovery indicates a near complete recovery of the stibnite in this rougher concentration stage. Also, the combined rougher antimony recovery of 76.0% is similar to the calculated percentage of antimony present as stibnite (71%), determined using the XRD/SEM data in Table 4.

IMO concluded that 24% of the antimony in the head sample is present within oxide minerals rather than locked stibnite within gangue minerals and that the reduced sulphur grade in the rougher concentrate was due to increased oxide gangue mineral recovery.

The rougher concentrate is being prepared for the next stages of test work. Rougher-regrind-cleaner flotation test work will be conducted with the aim of generating a high antimony grade by increasing the grade from ~30% to >50% Sb.

Element	Units	Composite 5
Sb	%	10.50
Total S	%	3.20
Si	%	34.4
Al	%	2.71
K	%	1.5
Fe	%	0.46
Ca	%	0.40
Mg	%	0.08
As	ppm	505
Au	g/t	2.41
Au - Duplicate	g/t	2.46

Table 1: Antimony Ridge – Composite Assay Summary.

Product	Mass		Sb			
	FT01	FT02	FT01		FT02	
	Mass	Mass	Assay	Dist'n	Assay	Dist'n
	%	%	%	%	%	%
Rougher Con 1-1	13.1%	9.5%	25.0	37.0%	24.5	24.5%
Rougher Con 1-2	21.5%	18.1%	25.8	62.3%	27.9	52.7%
Rougher Con 1-3	24.2%	23.3%	25.0	68.1%	29.4	71.5%
Rougher Con 1-4	26.2%	25.5%	24.0	71.0%	27.9	74.5%
Rougher Con 1-5	27.1%	26.6%	23.6	72.2%	27.3	76.0%

Table 2: Antimony Ridge – Combined Rougher Antimony Grades and Recoveries.

Product	Fe				S			
	FT01		FT02		FT01		FT02	
	Assay	Dist'n	Assay	Dist'n	Assay	Dist'n	Assay	Dist'n
	%	%	%	%	%	%	%	%
Rougher Con 1-1	0.20	5.5%	0.22	4.7%	22.0	64.2%	22.2	49.9%
Rougher Con 1-2	0.27	12.2%	0.23	9.5%	20.5	97.4%	20.5	87.2%
Rougher Con 1-3	0.42	21.3%	0.44	23.0%	18.5	99.2%	18.1	99.1%
Rougher Con 1-4	0.57	30.9%	0.63	35.9%	17.1	99.4%	16.6	99.4%
Rougher Con 1-5	0.62	34.9%	0.71	42.4%	16.5	99.5%	15.9	99.5%

Table 3: Antimony Ridge – Combined Rougher Iron and Sulphur Grades and Recoveries.

Mineral	Formula	% w/w
Quartz	SiO_2	65
Stibnite	Sb_2S_3	11
Muscovite/Phengite	$KAl_2AlSi_3O_{10}$ / $K(Al,Mg)_2(OH)_2(Si,Al)_4O_{10}$	18
Cervantite	Sb_2O_4	4

Table 4: Antimony Ridge – XRD/SEM Mineralogy of the Composite Sample

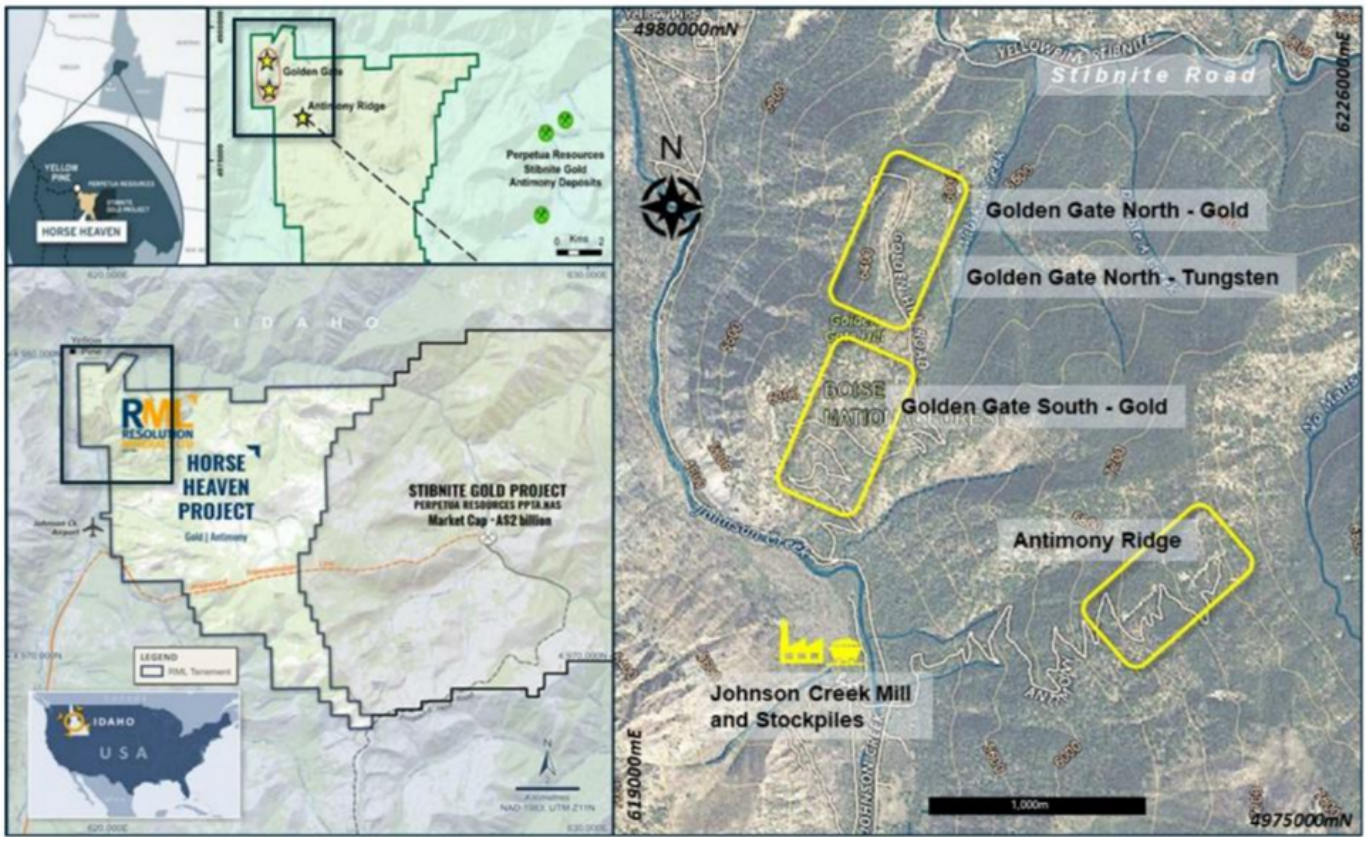

Figure 1: Antimony Ridge – As part of Resolution's Horse Heaven Antimony-Tungsten-Gold-Silver Project – Relationship of Antimony Ridge (Sb) with Golden Gate (Au) and Golden Gate Tungsten (W).

Authorised for release by the Board of Resolution Minerals Ltd.

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Forward Looking Statements

This announcement may contain forward-looking statements. These statements relate to the Company's expectations, beliefs, intentions or strategies regarding the future. These statements can be identified by the use of words like "anticipate", "believe", "intend", "estimate", "expect", "may", "plan", "project", "will", "should", "seek" and similar words or expressions containing same. These forward-looking statements reflect the Company's views and assumptions with respect to future events as of the date of this release and are subject to a variety of unpredictable risks, uncertainties, and other unknowns. Actual and future results and trends could differ materially from those set forth in such statements due to various factors, many of which are beyond our ability to control or predict. These include, but are not limited to, risks or uncertainties associated with the acquisition and divestment of projects, joint venture and other contractual risks, metal prices, exploration, development and operating risks, competition, production risks, sovereign risks, regulatory risks including environmental regulation and liability and potential title disputes, availability and terms of capital and general

economic and business conditions.

Given these uncertainties, no one should place undue reliance on any forward-looking statements attributable to the Company, or any of its affiliates or persons acting on its behalf. Subject to any continuing obligations under applicable law, the Company disclaims any obligation or undertaking to disseminate any updates or revisions to any forward-looking statements in this announcement to reflect any change in expectations in relation to any forward-looking statements or any change in events, conditions or circumstances on which any such statement is based.

Competent Person's Statement

The information in this report that relates to exploration results relating to metallurgy, is based on and fairly represents information reviewed and compiled by Dr Adam Roper PhD, M AusIMM, Metallurgist, who is a Member of the Australasian Institute of Mining and Metallurgy. Dr Roper has sufficient experience, which is relevant to the exploration activities, metallurgy and types of deposits under consideration, and to the activity which has been undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Dr Roper is a full-time employee of Resolutions Minerals Limited and consents to the inclusion in this announcement of the matters based on their information in the form and context in which it appears.

The Company confirms it is not aware of any new information or data that materially affects the information cross referenced in this announcement and further to "Agreement to Acquire Major US Antimony Project and Placement" on 11 June 2025, "Exceptional Rock Chip and Soil Results from Antimony Ridge" on 15 September

2025, “Exceptional Rock Chip and Soil Results Update” on 24 September 2025, “Significant Gold Discovery at Horse Heaven Project” on 28 October 2025, “Significant Gold Discoveries Continue at Golden Gate” on 3 November 2025, “Golden Gate Discovery Grows with Multiple Gold Intercepts” on 2 December 2025, “Further Ultra High Grade Antimony and Silver Results” on 14 January 2026, “New Gold Discovery at Golden Gate South” on 9 February 2026, “Gold & Significant Tungsten Mineralisation in Drilling” on 17 February 2026, “Exceptional Tungsten Grade Identified in Stockpile Material” on 26 March 2026, “Antimony Ridge Model Shows Extensive Vein Swarms” on 10 April 2026, “Antimony Trioxide Produced from Antimony Ridge“ on 14 April 2026 and “Tungsten Concentrates Produced from Golden Gate“ on 28 April 2026. The Company confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original announcements.